



LLCS/bm

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ISTITUTO DI GENETICA
UNIVERSITÀ DI PAVIA
VIA SANT' EPIFANIO, 14
PAVIA

Prof. Joshua Lederberg
Stanford University
Medical Center
Department of Genetics
P a l o A l t o, Calif.

Dear Joshua,

I still have our notes on the SM experiment and enclose Xerox copies of the relevant pages.

Your recollection is quite right. I do not have the typescript but it looks as if a whole line was deleted and its absence was not noticed because the sentence was still running smoothly. In fact, in the absence of an enlargement there would have not been enough material for the experiment, nor would have the later sentence of the same paragraph, referring to "further growth of the cells" have any meaning.

Note that the number of resistants per ml had increased in the Fig, but so had the total number, a peculiar behaviour I remember I retested later and found regularly.

My present plans for the trip to the West Coast seem to make it very likely that I will be able to spend some days in Stanford either between 3-5 January or better after January 15. Which period suits you better? Can you also tell Walter about it?

No definite news on Interist. Will write soon again about it.

Yours

L.L. Cavalli-Sforza

DATE:

Calculations & jackpot expts.

REF: S.M. indirect relation.

1

2

3

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10

JACKPOT

test day
(by sim.)

9/28

 $\frac{1}{2}$ wett. 37 vol \rightarrow 10/ml

9/28

 $\left\{ \begin{array}{l} 0/10 \text{ in } 0.1 \text{ ml} \\ 5/10 \text{ in } 0.1 \text{ ml} \\ 6/10 \text{ in } 0.4 \text{ ml} \end{array} \right\} \rightarrow$

9/30

1 ml, 5 vol.

5/ml

9/30

1 ml + 100 ml. [enlarging jackpot for clonal test.]

[1 ml + 7 ml] 10 tubes: 144 on 7 ml, average = 20.1/ml. [slight selective advantage?]
CLONAL TEST.

FIRST ENRICHMENT CYCLE: 0.2 ml in 10 ml: 35, 9, 11, 33, 6 /ml, ave = 19
var = 194

0.4 ml in 20 ml: 60, 19, 43, 47, 38, 55 /ml ave = 44
var = 209.

 $t = 2.9$

expected: 100/ml in 0.1
50/ml in 0.2 (or 100% chance)
25/ml in 0.4 (or 50% chance)

10/8

Counts in sm from 1 ml
2 ml

28, 30, 27, 45
57, 50, 56, 71

mean 32.5
63.5

var. 71
var 66

Culture 41.

10/18

Viable count: 10^6 0.1 ml: 123, 104, 417

Sim-count: 4 plates 1 ml: 25, 29, 31, 26

Culture 42, enlarged: Viable count: 10^6 0.1 ml: 120, 111, 126

Sim count: 4 plates 1 ml: 0, 0, 0, 0

DATE: 10/1

REF: SM undist solution

CLONAL TEST VS. POISSON.

100 ml broth 41, 42; from each, 1 ml to ^{PEN} 10 fresh tubes. To be incubated for 24h, then plated on NA Sm.

10/2

whole culture plated from each on 6 NA for poured agar plates, 100 μ /pl

Count 10/4

10	42:	135	col.	42	0	col.
		142			0	
		181			8	
	422	123			2	
		177			0	
		111			0	
		138			0	
		149			1	
		140			0	
		144			1	

Σx 1440

Σx^2 211510
207360

- 4150/9 =

m = 144

var.

variance = 461.1
expected: $144 \times 7 = 1008$

I notice a significant difference between the two groups. The difference is significant at the 5% level.

7/10/4